

Remarks

Claims 1-25 are currently pending in the present application. In view of the following remarks, reconsideration and withdraw of all grounds of rejection are respectfully requested.

Claim Rejections under 35 U.S.C. §102

Claims 1-25 stand rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 6,275,685 to Wessel et al., hereinafter “Wessel”.

Claim 1 recites:

A method for dynamically correcting an aspect of an electromagnetic wave being processed, said method comprising the steps of: processing two or more aspects of said electromagnetic wave along two or more separate signal paths;
comparing an expected value for at least one of said aspects of said electromagnetic wave along at least one of said signal paths with an actual value for said aspect of said electromagnetic wave to generate a correction signal; and
applying said correction signal to *at least one other aspect* of said electromagnetic wave.
[Emphasis added].

As emphasized above, Claim 1 is directed to dynamically correcting a first aspect of an electromagnetic wave by applying a correction signal generated from another aspect of the electromagnetic wave to the first wave aspect. As explained in the specification, when an electromagnetic wave is split into various aspects, each of which is processed along a separate signal path, the timing of the aspects tend to diverge, ultimately resulting in distortion. (see paragraph [0016] of the specification).

To correct this type of distortion, claim 1 recites comparing an expected value (i.e., a pre-processing value) of a first of the aspect signals with an actual value (i.e., a post-processing value) of that same wave aspect signal. From this comparison, a correction signal is generated. The correction signal is then utilized to correct another of the electromagnetic wave’s aspects.

To illustrate, if an electromagnetic wave were split into two aspect, say phase and amplitude, a pre-process timing value of a first of these aspects, say the phase, may be compared

to a post-process timing value of that same aspect (i.e., phase). As a result of this comparison, a correction signal (i.e., a phase correction signal) may be generated. This correction signal (based entirely on the phase aspect) may then be applied to the second of the wave aspects (i.e., the amplitude) to correct any distortion caused by, for example, divergence of the phase and amplitude signal paths.

Wessel, to the contrary, is directed to correcting distortion in high power linear amplifiers utilizing a comparison of aspects of two input signals: 1) a reference signal; and 2) a feedback signal. To this end, Wessel discloses an error detection sub-system (60) and an adaptive pre-distorter (70). (see Figs. 4-5, and col. 6, line 50-col. 7, line 12 of Wessel). According to Wessel, the error detection sub-system (60) requires as inputs a sample (42) of an input signal (i.e., a reference signal) (10) and a sample (54) of an output signal (i.e., a feedback signal) (28). (see Figs. 4-5, and col. 6, lines 63-65 of Wessel). Each of the sample signals (42, 54) are split into their respective phase and amplitude aspects. That is, the reference signal (42) is split into a reference phase signal and a reference amplitude signal, and the feedback signal (54) is split into a feedback phase signal and a feedback amplitude signal.

The two phase signals (i.e., the reference-phase signal and the feedback-phase signal) are then provided to a phase comparator, wherein the phase of the reference-phase signal is compared to the phase of the feedback-phase signal. (see col. 7, lines 34-41 of Wessel). As a result of this comparison, the error detection sub-system (60) generates phase error (84) for use in correcting the phase of the input wave (10). Similarly, the two amplitude signals are compared to generate a gain error (82) for use in correcting the gain, i.e., the amplitude of the input wave (10).

The phase (84) and gain (82) errors are then provided to the adaptive pre-distorter (70), wherein analog phase (94) and gain (92) correction signals are generated. (see Fig. 4; col. 6, lines 45-50 and 59-62; col. 8, lines 9-16 of Wessel). These correction signals (94, 94) are then applied to the input wave (10) via phase modulator (18) and amplitude modulator (16), respectively. (Id.).

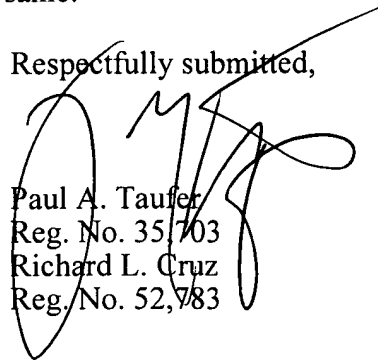
Unlike Claim 1, Wessel fails to disclose generating a correction signal from one aspect (e.g., phase) of a single input wave, and utilizing the correction signal to correct *another* aspect (e.g., amplitude) of the input wave. Instead, Wessel discloses the exact opposite. As described above, Wessel generates a correction signal from one aspect (e.g., phase) of two wave samples (42, 54), and utilizes that correction signal to correct that *same* aspect (e.g., phase) in the input wave (10). (see Figs. 4 and 5). Indeed, in order to correct a second aspect of an input wave, say the amplitude, Wessel requires the generation of a second correction signal.

Accordingly, since Wessel fails to disclose each and every element of Claim 1, the Applicants submit that Claim 1, and Claims 2-25 which recite similar features, is fully patentable over Wessel, and respectfully request reconsideration and withdrawal of this grounds of rejection.

Conclusion

In view of the foregoing claim amendments and remarks, the Applicants respectfully submit that the present Application, including Claims 1-25, is now in condition for allowance and respectfully request an indication reflecting the same.

Respectfully submitted,



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